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Committee on the Peaceful Uses of Outer Space

Recommendations of the Group of Governmental Experts on Transparency and Confidence-Building Measures in Outer Space Activities: views of States members of the Committee on the Peaceful Uses of Outer Space

Note by the Secretariat

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I. Introduction

1. In the report on its fifty-seventh session, the Committee on the Peaceful Uses of Outer Space agreed that at its fifty-eighth session, in 2015, it would consider the recommendations contained in the report of the Group of Governmental Experts on Transparency and Confidence-Building Measures in Outer Space Activities, with a view to identifying those recommendations that could, to the extent practicable, be adapted to and instrumental for ensuring the safety of space operations and the long-term sustainability of outer space activities in general (A/69/20, para. 373).

2. In a note verbale dated 31 July 2014, the Secretary-General invited States members of the Committee on the Peaceful Uses of Outer Space to submit their views on the modalities of making practical use of the recommendations. The present note was prepared by the Secretariat on the basis of a reply received in response to that invitation.

II. Reply received from a State member of the Committee

Russian Federation

[Original: English and Russian]
[9 February 2015]

Submission of the Russian Federation to the Committee on the Peaceful Uses of Outer Space on the identification of cross-links between the recommendations contained in the report of the Group of Governmental Experts on Transparency and Confidence-Building Measures in Outer Space Activities and the topic of developing guidelines on the long-term sustainability of outer space activities[1]

1. The Russian Federation considers the report of the Group of Governmental Experts on Transparency and Confidence-Building Measures in Outer Space Activities (A/68/189) to be a substantive step forward in defining requirements, motivations and widely shared choices in support of employing the factors of trust in the interests of ensuring the security of outer space activities. This document has clearly become an integral part of the baseline scenario of the prospective development of the regulation process in the field under consideration. One of the key elements of that baseline scenario is achieving positive dynamics in the area of practical analysis and resolution of complex and delicate issues relating to ensuring the safety of space operations that would clearly be extremely difficult, if possible at all, without increasing the level of confidence.

[1] The text of this submission was first made available, in English and Russian, as a conference room paper at the fifty-second session of the Scientific and Technical Subcommittee (A/AC.105/C.1/2015/CRP.33).

2. The preparedness and ability of States to choose the optimal means of implementing the recommendations formulated by the Group of Governmental Experts, which in the assessment of its Chairman, Ambassador-at-large Victor L. Vasiliev, "serve as a starting point in addressing the issues of space security in all their diversity", are of the utmost significance. In that regard, the phase of implementing the recommendations and their transformation into various sets of regulatory functions will require sincere and effective support from both the States represented in the Group of Governmental Experts and the world community in general, including the United Nations itself. The level of individual and collective responsibility shown in addressing the relevant objectives will be of fundamental importance.

3. Establishing a model of trust, which is a difficult, systemic problem, requires, in addition to determining a list of potential measures in this area, the creation of a mechanism ensuring the transition to a level of working out detailed forms, methods and means of reaching specific goals. The guidelines on ensuring the long-term sustainability of outer space activities being elaborated by the Scientific and Technical Subcommittee of the Committee on the Peaceful Uses of Outer Space are the tools for transforming the range of ideas contained in the report of the Group of Governmental Experts into practical regulations. The format of the guidelines affords opportunities to develop sets of solutions in the form of specific normative functions. In this context, attention should be drawn to the fact that the concept of transparency is frequently associated — by virtue of established basic notions — with only a certain, limited set of actions related to specific types of space activities, including provision of information on national space policies and arrangement of the presence of international observers at sites where space launches are prepared and conducted. In fact, transparency is a combination of confidence-building tools. This conclusion is borne out by the work on the guidelines for ensuring the long-term sustainability of outer space activities, which has made it possible to view the topic of confidence in its dynamic development and in all of its delicate inner correlations. The Russian Federation is consistently developing and submitting for consideration proposals on ways and means of regulating issues related to ensuring the long-term sustainability of outer space activities, thus providing persuasive confirmation of the fact that a "technique" for solving emerging and challenging tasks can, indeed, be developed, while confidence, which currently is largely a conceptual notion, has the potential to become the leading factor in regulating the safety of space operations. Russian proposals are based on needed and practically feasible measures, each requiring to a varying extent that States and international intergovernmental organizations master the algorithm of action in conditions of greater mutual informational awareness and openness.

4. Negotiations on the long-term sustainability of outer space activities conducted by the Scientific and Technical Subcommittee's Working Group on the Long-term Sustainability of Outer Space Activities provide a unique platform for taking self-sufficient solutions which can provide the basis for developing an integrated system of measures ensuring the safety of space operations. The guidelines themselves should have the qualities making it possible to maintain the security of space activities in practice. In the negotiation process, the Russian Federation, demonstrating its reliability as a dialogue partner, fair intentions and aspiration to provide common motivations for success, has presented interrelated

draft guidelines, which reflect, with a proper level of relevancy, many significant aspects of confidence-building. The proposals are essentially of a technocratic nature and address important issues, the regulation of which has never before been discussed at the political level. The Russian proposals, inter alia, represent a concentrated form of all those main ideas contained in the report of the Group of Governmental Experts which are clearly related to the long-term sustainability of outer space activities. Draft guidelines presented by the Russian Federation as of February 2015, in particular, address the following: deterrence and prevention of external interference in the functioning of national ground-based space infrastructure; prohibition of the use of information and communication technologies for purposes of hostile acts against foreign space objects and ground-based space infrastructure; procedures for the safe and legitimate conduct of operations for the active removal of non-functioning space objects from orbit and the intentional destruction of space objects; modalities for the phased introduction at the national and international levels of the practice of prior notifications of space launches in order to avoid collisions with objects located in outer space; and the prevention of negative impact on foreign space objects through unauthorized access to their on-board hardware and software. Thus, a course towards identifying all significant security-related features of space operations is being maintained in a clear and consistent manner.

5. A self-contained and important option, proposed by the Russian Federation to the international community in this context, is the establishment under the auspices of the United Nations of a unified centre for information on near-Earth space monitoring as a rationally shaped information platform. The Russian Federation proceeds from the understanding that information support for common needs in the field of safety of space operations should definitely fall within the cognizance of the United Nations. The main elements of the centre's concept are set out in the working paper submitted by the Russian Federation (A/AC.105/L.290). That working paper describes fundamentally important aspects of the stepwise creation and development of the centre's architecture. A more thorough study of these aspects, conducted jointly with the Office for Outer Space Affairs (in relation to the infrastructural capacity of the Office and of the United Nations Office at Vienna), would make the centre's technical configuration more complete from a functional point of view. The long-term cumulative effect of the centre's functioning would consist of vesting trust and trusting relationships in the context of space activities with unprecedented constructive traits.

6. The publication of national space doctrines as well as their accompanying regulations positively affects the informational awareness of participants in space activities. This practice should be fully encouraged in the future. It is obvious that the availability of information on national regulations meets transparency requirements. As for the impact of such information on increasing trust, in this context the situation is not so clear-cut: the production of doctrinal ideas on the use of outer space and regulation of space activities, underpinned by extreme egocentrism, and their reflection in national policy documents, not only significantly narrows, but also can completely block, the possibilities for the practical implementation of confidence-building measures. It is obvious that doctrine orientation, focused on achieving domination in space, is a priori incompatible with the task of increasing trust in outer space activities, and in the

context of the Group of Governmental Experts' conclusions and recommendations seems, at least, eccentric, controversial and inappropriate.

7. The pronounced trends of managing national outer space activities in a discretionary manner objectively make it necessary to maintain basic standards in the field of law and security. Being guided in this context by an appropriate and constructive motivation, the Russian Federation has highlighted the importance of clarifying in joint political and legal analytical deliberations what would be the kind of crisis situation (conflict of interest) in outer space — from the standpoint of behavioural and technical criteria — that would entail examining the possibility of invoking the right of self-defence in conformity with the Charter of the United Nations. It is important to clarify these issues given that any actions in outer space aimed at the deliberate disablement or destruction of foreign space objects will objectively have a multiplicative effect and will therefore make the situation uncontrollable. The working paper of the Russian Federation entitled "Achievement of a uniform interpretation of the right of self-defence in conformity with the Charter of the United Nations as applied to outer space as a factor in maintaining outer space as a safe and conflict-free environment and promoting the long-term sustainability of outer space activities", submitted to the Committee on the Peaceful Uses of Outer Space in February 2015, contains a broad review of those aspects of the management of outer space activities that would significantly contribute to the development of more precise assessment categories and objective characteristics of actions in situations when there is a conflict of interest in outer space (taking into account its nature and intensity) and to the process of clarifying the modalities for invoking the right of self-defence as applied to outer space. Consideration of these aspects by the Committee on the Peaceful Uses of Outer Space is intended to provide a prism (including terms and analytical categories) which would make it possible to classify the signs and types of hypothetical conflict situations and reach an understanding of what proportionate response should be made to different conflict situations. The Russian Federation has developed a draft guideline, "Implementation of operational and technological measures of self-restraint to forestall adverse developments in outer space", to serve the purpose of promoting the long-term sustainability of outer space activities. The methodological scheme proposed in that guideline is aimed at adapting, in terms of policy, to the increased requirements for the safety of space operations and assisting in effecting serious changes to the axiomatics of assessments by States of those specific activities in space which have the potential to give space operations conflict-fostering or even dramatic aspects. This Russian initiative fully corresponds to the key message of the Secretary-General of the United Nations, contained in his foreword to the report of the Group of Governmental Experts (A/68/189): "It is critically important for all nations to work collectively to keep [outer space] free from destabilizing conflict and to make it safe, secure and sustainable in the long term for the benefit of all humankind". In addition, the report of the Group of Governmental Experts itself highlights that transparency and confidence-building measures can "assist in building confidence as to the peaceful intentions of States and can help States to increase understanding, enhance clarity of intentions and create conditions for establishing a predictable strategic situation in both the economic and security arenas" (para. 20). The report of the Group of Governmental Experts also points out that "with regard to maintaining international peace and security, it is clear that it is in the shared interest of all nations to act responsibly and in accordance with

international law when carrying out outer space activities, in order to prevent mishaps, misperceptions and miscalculations" (para. 9).

8. The Russian Federation has undertaken determined efforts to encourage the Committee on the Peaceful Uses of Outer Space to take a long-overdue decision to update its approach — and essentially adopt a new one — to addressing the priority item on its agenda concerning ways and means of maintaining outer space for peaceful purposes by providing for an actual switch to a discussion of significant issues of space security. In the new context, the subject of self-defence in outer space may become quite a logical continuation of the issue of the safety of outer space operations. Furthermore, in the light of the comments above, it would be of interest to discuss in the Committee on the Peaceful Uses of Outer Space those national doctrinal objectives that may attract attention from the standpoint of their correlation with the requirements of ensuring the long-term sustainability of outer space activities, as well as determining ways and means of maintaining outer space for peaceful purposes. Such an initiative would be fully consistent with relevant actions to support transparency and confidence-building measures that imply the articulation of a State's principles and goals relating to outer space policy.

9. The Group of Governmental Experts highlighted a number of aspects of ensuring and sustaining the necessary correlation of the activities of States with the requirements of enhancing transparency and confidence in outer space activities, the presumptive relevance of which had been confirmed, in principle, long before the adoption of the report of the Group of Governmental Experts, and, all the more, the technical discussions initiated in 2012 within the Scientific and Technical Subcommittee's Working Group on the Long-term Sustainability of Outer Space Activities. However, it was precisely within that Working Group that experts from many countries (including those represented in the Group of Governmental Experts) held extensive discussions, during which they managed, inter alia, to specify the technical meanings of generic terms and notions, as well as the types of information playing a key role in the implementation of efficient measures aimed at ensuring the safety of space operations. The experts were tasked with considering, further elaborating and producing, by comparing various practices in the field of supporting in-orbit operations, consolidated proposals on the most functional and generally acceptable operational solutions for ensuring the safety of outer space operations. The practice has shown that this task can be fulfilled given expertise and good will. Thus, it has become possible to identify, in a number of cases, common functional features in approaches to regulating certain aspects of ensuring the safety of outer space operations that correspond to the relevant recommendations of the Group of Governmental Experts and that also enrich those recommendations with additional important elements and details. In particular, on the basis of a consensus it was recognized that for the purposes of ensuring the safety of orbital flights of space objects, in terms of preventing collisions in orbit, it would be significantly more useful to provide the ephemeris information that describes quite fully — in terms of content — and at the same time simply the trajectory of motion of space objects, rather than the aggregate information on the current trajectory of motion and scheduled manoeuvres (as provided for in paragraph 42 of the report of the Group of Governmental Experts (A/68/189)). Experts have also developed a draft guideline relating to measures that could be conducive to increasing the accuracy of the tracking of space objects. That guideline reflects the need to develop and introduce new methods of increasing the accuracy of measurement and orbital information,

expanding the existing network for monitoring near-Earth objects, combining data from various sources and assessing their reliability. Accordingly, modalities of solving this issue were studied in a rather deep and fruitful manner, and such modalities are not confined to the exchanges of information on the "basic orbital parameters of outer space objects" emphasized in paragraph 39 of the report of the Group of Governmental Experts. Such cases, when certain ideas contained in the report of the Group of Governmental Experts and ideas underpinning solutions being worked out in the context of ensuring the safety of space operations may have affinities but nevertheless do not coincide entirely and even compete to an extent, should be treated dialectically in the sense that the certainly right motivation of the recommendations of the Group of Governmental Experts does not preclude but rather encourages finding the best operational solutions.

10. The report of the Group of Governmental Experts, in fact, confirms one of the basic policy lines of avoiding the intentional destruction of any in-orbit spacecraft and launch vehicle orbital stages or other harmful activities that generate long-lived debris, as established in the Space Debris Mitigation Guidelines of the Committee on the Peaceful Uses of Outer Space. In order to further develop the basic policy line referred to above, it is necessary to really work out the implementation procedures for such operations, where required, that would be based on clearly perceived responsibilities and include relevant safety assurance procedures and thus feature all necessary systematic actions. The Russian Federation presented the draft guidelines, which fully meet all the requirements of responsible management in this area: "Modalities for ascertaining substantively relevant bases for addressing and meeting requirements for the safe conduct, in extreme cases, of operations resulting in the destruction of in-orbit space objects", and "Integrating and sustaining a shared cross-functional perception of, and definition of incremental steps to ensure, the safe implementation of operations for the active removal and intentional destruction of space objects, specifically, as applied to non-registered objects". Russian initiatives incorporate a responsible approach to building a proper regulation in this area. They are fundamentally different from the approaches embedded in the current version of the draft code of conduct for outer space activities that have, in fact, a critical degree of ambiguity attached to them, due to the desire to provide a sort of legitimate grounds for coercive actions in respect of foreign space objects, including their destruction.

11. Paragraph 6 of the report of the Group of Governmental Experts notes "a growing concern that threats to vital space capabilities may increase during the next decade as a result of both natural and man-made hazards and the possible development of disruptive and destructive counterspace capabilities". In this context, hazards to the functioning of space objects and in-orbit operations, arising from actions that could cause damage to the space environment, require attention. In line with that understanding, the Russian Federation has submitted a draft guideline titled "Prevention of dangerous alterations of space environment parameters resulting from intentional modifications", which is aimed at augmenting regulation in this area that is very important for the safety of space operations, as based on the Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques, which entered into force on 5 October 1978.

12. The recommendation of the Group of Governmental Experts to submit pre-launch notifications (A/68/189, para. 41) is chiefly associated with the provisions of the Hague Code of Conduct against Ballistic Missile Proliferation. Nevertheless, the Russian Federation considered that recommendation more broadly, in particular from the standpoint of its utility for, firstly, assisting with launch registration accounting and, secondly, ensuring flight safety during orbital phases of launches. The practice of prior notifications had and still has various formats. Further consideration of matters related to the ways and means of streamlining and formalizing this practice is called for. With respect to flight safety, after analysing and examining the real value of the potential norm in question, its purpose and the conditions for its implementation, the Russian Federation developed a completely systematic and wholly rational approach to ensure, through a step-by-step process, that the situation develops in a way that would make it really possible to design a secure launching scheme. This approach is contained in the draft guideline titled "Achievement of basic understanding and development of practical approaches with regard to identifying, in the course of the preparation and conduct of launches, probable conjunctions of newly launched objects with objects already present in near-Earth space".

13. Due maintenance of the international practice in registering space objects and continuous improvement of its quality are becoming increasingly important. It is clear that both confidence-building in space activities and, to a certain extent, ensuring the safety of space operations are contingent upon the effective resolution of these issues. Without discipline in the registration of space objects it will hardly be possible to continuously improve the overall level of space security. The adoption of General Assembly resolution 62/101 of 17 December 2007 signals the need to develop the registration practice. Thus, it can be stated that there is an established understanding on this matter, and the goals also seem clearly defined. An essential element — a mechanism for achieving the goals — is lacking. Consequently, there has been no real progress in resolving these issues. A draft guideline introduced by the Russian Federation in a working paper entitled "Considerations regarding the modalities for consolidating understanding on issues of enhancing the practice in the registration of space objects in view of the need to ensure the safety of space operations", should allow a shift from the present status quo to action and offer reliable and positive prospects of improving the registration practice. Within the overall context of anticipated positive changes in the registration of space objects, it would be rather appropriate to devise a practical way to provide for the accessibility of national registries of space objects, as stipulated in the report of the Group of Governmental Experts.

14. The Russian Federation assumes that it is possible and expedient, within the framework of further discussions in the context of the space operations safety regime being developed, to pay due attention to the clarification of shared approaches to implementation of the recommendations stated in paragraphs 43 and 44 of the report of the Group of Governmental Experts, concerning notification of uncontrolled re-entry and monitoring of such re-entry, as well as notification in the case of emergency situations.

15. The Russian Federation attaches considerable importance to the development of a set of guidelines on ensuring the long-term sustainability of outer space activities and aims at ensuring that the space operations safety regime currently

being developed achieves its maximum potential. The Russian Federation has accordingly submitted a draft guideline, "Establishment of normative and organizational frameworks for ensuring effective and sustained implementation of the guidelines and subsequent activity on their review and enhancement". The intent of that draft guideline is to ensure that the motivation for the application and possible further enhancement of the provisions of the guidelines is obvious and constructive both at the national level and within the United Nations system.

16. In consideration of the diversified nature of transparency and confidence-building measures, the Russian Federation, together with the two key co-authors of General Assembly resolution 69/38, the People's Republic of China and the United States of America, proposed the holding, during the seventieth session of the General Assembly, of a joint meeting of the First and Fourth Committees "to address possible challenges to space security and sustainability", and this proposal was included in the operative part of the resolution.